

Amendments to the Specification

Please amend the specification as follows, using the paragraph numbering of U.S. Patent Application Publication No. 2006/0037843, as follows:

[0004] In the prior art there is a plurality of vibrating recipient type devices, such as the one disclosed in ~~the American document~~ U.S. Patent No. 6,257,392, which use the same principle, that being the transmitting of vibrations to parts stored inside the recipient so that they follow a precise path allowing them to be released from said recipient, one after the other and most commonly touching the preceding part as well as the succeeding part.

[0008] Among these devices, the one proposed in ~~the American document~~ U.S. Patent No. 5,385,434 which discloses a distribution device from a storage means to an effector, of parts such as electric connector type parts which are different to rivets and most of all blind rivets. This device is remarkable in that it comprises:

[0009] distribution means connected to a distribution channel and implemented by a high-pressure jet allowing to create a differential pressure producing a suction effect resulting in the displacement on the inside of a channel of parts from the storage means to the effector[.];

[0010] unitary supply means located upstream of the distribution means and implemented via a rotary selector[.]; and

[0012] This device has the advantage of using compressed air to replace the use of gravity so as to supply the effectors and orient the parts for the effectors. This displacement of air also allows ~~to displace~~ the parts to be distributed from the storage means, which is not a vibrating recipient, to the distribution means.

[0015] According to the invention, the distribution device for parts, notably rivets released at the outlet of a means for storage, such as a vibrating recipient [[which]] that, in the vicinity of its outlet, has a displacement path for [[said]] the parts, is remarkable in that it is constituted of:

[0016] an actuating a control module authorizing the unitary intake of parts released by [[said]] the storage ~~and distribution~~ means on the inside of a channel [[,]] ;

[0018] a suction means intended to drive the moving parts on the inside of the channel in a unitary manner by accelerating the part which is under the ~~greatest depression~~ lowest air pressure.

[0019] This feature is especially advantageous in that it proposes the detecting of the orientation of the parts once they have been released from the vibrating recipient and prior to passing through the device that ~~performs the following step, that being of distribution distributes the part.~~ Detecting the orientation of a part ~~The obtaining of reliable information~~ allows the distribution device to direct the part or rivet directly towards the following step in the same orientation as [[it]] the part was introduced into the channel or ~~be directed to direct the part~~ towards a turning device in order to ensure [[it]] the part is turned and [[have]] has the desired orientation.

[0021] Additionally, such a device can count the number of parts for which it has monitored [[their]] ; the orientation of, which constitutes a particularly beneficial function in the framework of an intermediary processing step of the ~~distributed~~ distribution of parts.

[0022] The ~~displacing displacement~~ of the parts inside the device is not ensured by a ~~motorised~~ motorized means of displacement, but instead, is ensured by the displacing of air, and therefore, the exercising of ~~depression~~ low pressure in the channel via the suction means. The choosing of this displacement means is especially judicious in that it ~~optimises~~ optimizes the unitary passing of the parts inside the device. Indeed, the suction will only affect the part

nearest the channel and will leave the next ~~leaving the following~~ part, which is subject to a lesser pressure drop, depression ~~unmoved as~~ ~~[[it]] the next part~~ is further away ~~from the suction means~~ and ~~is~~ obstructed by the asymmetrical shape of first part. The ~~optimising~~ optimizing of the airlock created by the control module at the inlet of the channel guarantees a unitary passing of the parts before the control module and consequently efficient detection of the orientation of ~~[[said]] the~~ parts.

[0023] The distribution device of the invention differs to that proposed in the prior art in that it is located at the outlet of a vibrating recipient or an equivalent, which, by definition, ensures the displacement of the parts it holds towards its outlet. Consequently, the parts received by the device of the invention are already moving. Therefore, the suction here does not put the parts into displacement, but accelerates the displacement of the parts located at the far end of the outlet of the displacement path to be ~~travelled~~ traveled along and guarantees a unitary intake into the distribution device itself, subject to the vibrating of the recipient. The distribution device for parts released at the outlet of a vibrating recipient therefore fulfils other functions than those required by a distribution device of parts stored in a more typical recipient. It is the result of a permanent desire of the applicants searching to control the orientation of parts as far upstream as possible of the displacement circuit of the latter, that being in the vicinity of the storage means, which, in this case, is a means of vibration.

[0024] The suction generated in the invention is therefore a means of accelerating the displacement of some parts already in motion ~~[[.]]~~ ~~[[this]]~~ This suction guarantees that the parts under the greatest depression, that is, the lowest air pressure, will be the first part and only part to enter the distribution device of the invention.

[0032] As illustrated in the drawings in FIGS. 1 and 2, the distribution device for parts of rotational symmetry, indicated through by D, notably of rivets indicated by R, released at the outlet of a storage means such as a vibrating recipient indicated by 100 which has a displacement path for said parts R in the vicinity of its outlet 110, is constituted of a ~~control module~~ an actuating module 200 authorizing the unitary intake of the parts R released by said

storage means 100 on the inside of a channel C and by a control module 300 for orientating each part R passing through the channel C.

[0034] According to the invention, the device D comprises a suction means 500 (~~not shown~~) aimed at directing the parts R to the inside of the channel C and ensuring their displacement on the inside. The parts R travel along the path illustrated by the arrows indicated by F_1 which are here parallel to the axis of the channel C.

[0035] Indeed, as illustrated and according to the invention, the longitudinal axis of ~~[[said]]~~ the channel C is placed in a coaxial manner to the axis of the parts R. Thus, the diameter of the channel is ~~define~~ defined so that the ~~biggest~~ largest diameter of the parts with rotational symmetry likely to be distributed in the recipient 100 can pass through.

[0036] According to the invention and as illustrated in greater detail in FIG. 2, ~~said control~~ the actuating module 200 is constituted of a first detection means (not shown) and of a movable actuating element 210 located in front of the inlet of the channel C and whose displacement for the purpose of closing off the inlet of the channel C is controlled by the detection via ~~[[said]]~~ the first detection means of the intake of a part R on the inside of the channel C. According to the invention, the parts R arrive by means of vibrations from the vibrating recipient at the inlet of the channel C, which is put under ~~depression~~ lowest air pressure with the aim of sucking the parts R. Thus, the displacement towards the device D is ensured first by the vibrations of the recipient, and then on the inside of the channel in a unitary manner ~~thanks due~~ to the depression drop in air pressure created by the suction means 500.

[0037] To guide the passing through of the parts R towards the inlet of the channel C, the ~~control module~~ actuating module 200 advantageously comprises a ramp 220 upstream of the inlet of the channel C and extending beyond the displacement path preformed in the vibrating recipient 100 in the vicinity of its outlet 110.

[0038] Once a part R has entered the channel C, it is detected, the ~~control module~~ actuating module 200 actuates the movable actuating element 210 in the direction of the arrow A in order to obstruct the inlet of the channel C guaranteeing the unitary passing through of the parts R on the inside of the device D avoiding any risk of jamming or poor detection of the orientation of the part R.

[0039] According to the invention, the movable ~~control~~ actuating element 210 at the inlet of the channel C is actuated by a cylinder type displacement means ~~for displacing~~ 211, the movable actuating element 210 constituting the far end of the same shank of the latter (211). According to the illustrated embodiment, the axis of the shank of the cylinder type displacement means 211 is perpendicular to the axis of the channel C, the exiting of the shank (arrow A) thus obstructing the inlet of the channel C, the inserting of the shank freeing it.

[0040] According to the invention, ~~[[said]]~~ the control module 300 is constituted of a second detection means 310 placed right next to a retractable position retention means 320 of the part R inserted into the channel C. ~~[[, the]]~~ The absence or presence of a ~~[[bit]]~~ piece of the part R, for example, the head of a rivet, from the side of the position retention means 320 where the detection means 310 is located thus provides information relating to the orientation of the part R.

[0041] The far end corresponding to the outlet of the channel C is fitted with a connection 400 allowing ~~to connect~~ the connection of any routing means for the distributed parts ~~and therefore~~ for which the orientation has been detected.

[0043] As illustrated, ~~[[said]]~~ the position retention means 320 is constituted of a two-prong fork 330 lying on either side of the axis of the channel C, which ~~[[it]]~~ the position retention means 320 obstructs, ~~and whose~~ A gap provided by the position retention means 320 determines the diameter of the piece bit, likely to pass through, of the part R inserted that is able to pass through the gap due to its ~~into the channel C~~ and coming into contact with the prongs ~~[[330]]~~ of the fork 330.

[0044] According to the illustrated embodiment, the position retention fork 330 is actuated by a cylinder type displacement means ~~for displacing~~ 311, for example, a piston (see FIG. 2). The exiting of the shank allows the two prongs of the fork 330 to obstruct the channel C and the inserting of the shank allows to free the passageway. Thus, the movable ~~control~~ actuating element 210 at the inlet of the channel C as well as the position retention fork 330 are each actuated by the cylinder type displacement means 311.

[0045] According to the invention, the above described operating method of the device associated with a means for turning the parts R located downstream of the distribution device D, ~~consists with~~ includes, running the suction means 500 in a running mode and ~~the fork 330~~ obstructing the channel C with the retention fork 330 as illustrated in FIG. 3a:

[0046] [[in]] opening the inlet of the channel C by retracting the movable actuating element 210, as illustrated in FIG. 3b, ~~thus activating the~~ to activate a drop in air pressure; ~~depression;~~

[0047] ~~in letting the sucked~~ allowing the part R1 under low air pressure to ~~(which will be indicated by R1 for greater clarity)~~ pass through the inlet of channel C ~~which, already moving, is accelerated~~ and to accelerate towards the channel C via suction;

[0048] [[in]] closing off the channel C via the returning of the movable actuating element 210 when the passing through of the part R1 is detected in the channel C (as illustrated in FIG. 3c) [[,]] ;

[0049] [[in]] detecting via the detection means 310 the presence or absence of a shank of part R1 downstream of the fork 330 once R1 is in contact with the prongs of the fork 330 [[,]] ;

[0050] [[in]] retracting the fork 330 so as to let the part R1 pass through [[,]] ;

[0051] ~~in channelling~~ channeling or not ~~channelling~~ channeling the part R1 towards the turning means according to the desired orientation of the parts[[.]] ; and

[0052] [[in]] obstructing the channel C by means of the fork 330.